HIE in EMS SUMMIT 2014

Patient Unified Lookup System for Emergencies (PULSE)

AUDACIOUS INQUIRY | BOLD SOLUTIONS FOR CONNECTED HEALTHCARE

HIE and EMS Report

- **Objective:** assess the current state of both emergency medical services (EMS) agencies/providers' and health information exchange organizations' (HIOs) capacity and interest in collaborating to pursue EMS and disaster response oriented exchange services in California and the Gulf Coast.
- California had already made important and differentiating progress with CalEMSA and Local EMSAs placing emphasis on the potential of HIE.


HEALTH INFORMATION EXCHANGE SERVICES IN SUPPORT OF DISASTER PREPAREDNESS AND EMERGENCY MEDICAL RESPONSE

Assessment of Opportunity in California and the Gulf Coast

ONC and ASPR

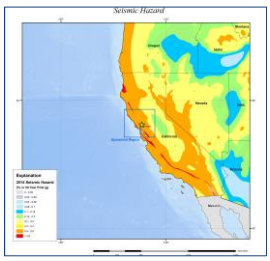
- The Office of the National Coordinator for Health Information Technology (ONC), the federal agency that oversees the nationwide effort to transition to and meaningfully use health information technology (HIT), has sought to capitalize on the emerging HIT infrastructure.
- ONC and ASPR have a significant interest in seeking opportunities to leverage health IT and HIE infrastructure to support emergency preparedness and response.

Impetus for the Effort

- Over the last decade, a number of significant disasters have struck the United States, including hurricanes, tornadoes, and terrorist attacks.
- Each of these events has resulted in evacuations and/or the treatment of patients outside of normal geographic care setting.
- Consequently, patients are cared for in the absence of important information.
- As the nation has moved towards the digitization of patient's health information, many initiatives have focused on how electronic patient data can be used during a disaster or emergency to improve care.

National Status and a Focus on California

- In 2014, the country received a "C-" for disaster preparedness and a "D-" for access to emergency care from the American College of Emergency Physicians.
- Recent United States Geological Survey on four faults in California predicted a major earthquake will occur in the next 30 years.
- ONC and ASPR are working to capitalize on the emerging HIT infrastructure to support disaster response with an initial focus on California, particularly relating to an earthquake response scenario.



*Map provided by the U.S. Department of the Interior U.S. Geological Survey: http://earthquake.usgs.gov/earthquakes/eqarchives/poster/2014/20140824.php

Some Background on the Process

- Ai met both virtually and in-person with EMS providers and agencies, public health agencies, state health information technology (HIT) coordinators, health information organizations (HIOs), health systems, and emergency preparedness officials in California and the Gulf Coast.
- In addition, Ai met with National EMS Information System (NEMSIS) staff.
- The meetings were used to solicit feedback on two high level use cases, and the feedback was then used to further refine the use cases.

Who Participated in California?

Bay Area
- California Association of Health Information Exchanges (CaHIE)
- Health Share Bay Area
- Contra Costa County Emergency Medical Services Agency
- Alameda County Emergency Medical Services Agency
- Kaiser Permanente
- Northern California Hospital Association
- Advanced Medical Response

Los Angeles
- Inland Empire County Emergency Medical Services Agency
- Orange County Emergency Medical Services Agency
- Los Angeles County Emergency Medical Services Agency
- Los Angeles County Fire Department
- LANES – Los Angeles HIE
- Orange County Partnership Regional Health
- Inland Empire Health Information Exchange
- Southern California Hospital Association

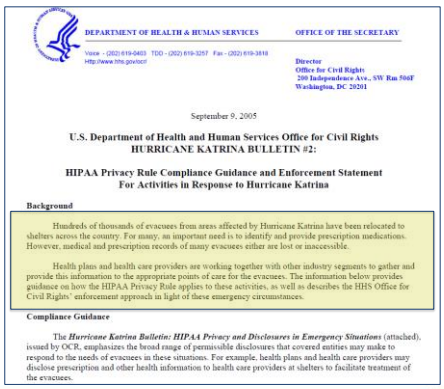
San Diego
- San Diego County Emergency Medical Services Agency
- San Diego County Fire Department
- San Diego Health Connect
- San Diego Department of Health

Use Case 1 – EMS Data Sharing To/From Hospitals

- EMS personnel send data from their electronic patient care record (ePCR) to hospital EDs.
- The hospitals make patient data available to EMS personnel for query while in the field.
- Finally, patient outcome information to support EMS quality improvement objectives is sent from the hospitals to EMS providers.
- The use case would be accomplished with the support of an HIO that is responsible for mapping and routing the data among EMS providers and hospitals.

Intro to Use Case 2: Katrina Experience and ICERx

- This was initially highlighted in the aftermath of Hurricane Katrina, as thousands of residents lost their medical histories and were temporarily or permanently displaced by the flooding.
- Some companies (primarily SureScripts) quickly reacted and created KatrinaHealth, a web portal that allowed physicians and pharmacists to search for a patient's medication history.
- The site was available for a number of weeks, and was followed by the more permanent In Case of Emergency Prescription Database (ICERx). ICERx worked similarly to KatrinaHealth and was developed and run by the same organizations.
- It was used three times after Hurricane Katrina, but has since been shut down.
- However, the industry recognized the need for access to patients' medical histories when they are displaced from their primary care physician and community hospitals.



DEPARTMENT OF HEALTH & HUMAN SERVICES — OFFICE OF THE SECRETARY

Director
Office for Civil Rights
200 Independence Ave., SW Rm 506F
Washington, DC 20201

September 9, 2005

U.S. Department of Health and Human Services Office for Civil Rights
HURRICANE KATRINA BULLETIN #2:

HIPAA Privacy Rule Compliance Guidance and Enforcement Statement
For Activities in Response to Hurricane Katrina

Background

Hundreds of thousands of evacuees from areas affected by Hurricane Katrina have been relocated to shelters across the country. For many, an important need is to identify and provide prescription medications. However, medical and prescription records of many evacuees either are lost or inaccessible.

Health plans and health care providers are working together with other industry segments to gather and provide this information to the appropriate points of care for the evacuees. The information below provides guidance on how the HIPAA Privacy Rule applies to these activities, as well as describes the HHS Office for Civil Rights' enforcement approach in light of these emergency circumstances.

Compliance Guidance

The ***Hurricane Katrina Bulletin: HIPAA Privacy and Disclosures in Emergency Situations*** (attached), issued by OCR, emphasizes the broad range of permissible disclosures that covered entities may make to respond to the needs of evacuees in these situations. For example, health plans and health care providers may disclose prescription and other health information to health care providers at shelters to facilitate treatment of the evacuees.

Use Case 2 – Disaster Response and Medical History Portal

- Relying on single sign-on (SSO) integrations, enable access to HIOs and Health Systems from a single web portal.
- During a disaster (the definition of which is agreed upon by participants in advance), the web portal is activated.
- Healthcare professionals employed by health systems or participating with HIOs would be able to access patient records through SSO from their existing systems, and other healthcare professionals, such as first responders, would be able to access the portal through a URL.

The Core Concept Behind PULSE

- Providing first responders and healthcare providers with access to individuals' health data (including medications, allergies, problems, etc.) could facilitate and improve the care displaced individuals receive.
- Initial conceptualization was a basic website that could establish pre-existing connectivity with participating HIOs and health systems to enable access under certain disaster declaration scenarios.
- PULSE connects to an "interoperability broker" and allows users to query for patient medical histories in two ways: 1) through a standalone web portal that can be accessed by healthcare professionals that are not connected to a participating HIO or health system (including first responders); and 2) through a participating HIO or health system's own web portal.

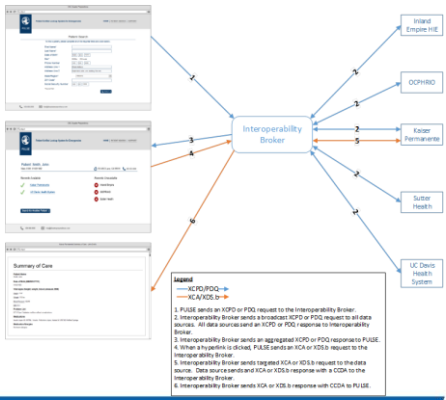
Disaster Response Use Case Evolution

- The disaster response use case discussion evolved over the course of the sessions in an important way (especially during the LA meeting).
- The initial use case presented focused on creating what we perceived to be the lowest barrier opportunity to enable access across public and enterprise HIE organizations.
- As presented at the conceptual level in each session, by focusing on a basic single-sign on assertion (e.g. SAML 2.0), a basic website could establish pre-existing connectivity with participating HIOs enabling access under certain (and pre-defined) disaster declaration scenarios.
- But this approach also had some important shortcomings….

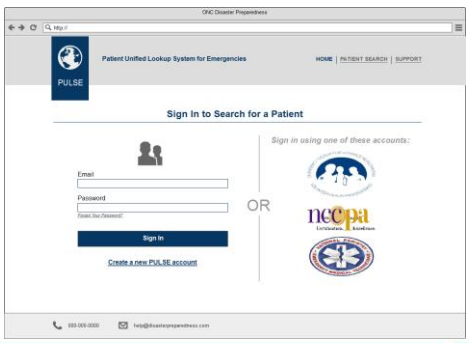
Disaster Response Use Case Evolution

Initial hypothesis: avoid the need to comply with IHE-based eHealth Exchange transactions could reduce barriers to participation. However, the following key points below impacted the ultimate use case outlined below.

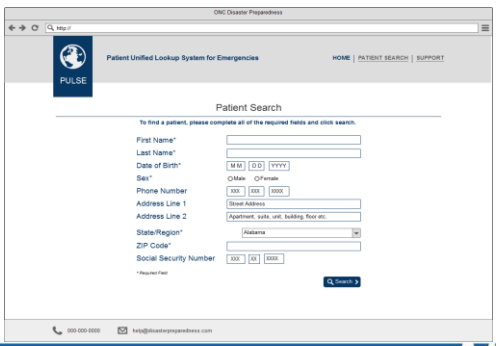
- Although simple access to other HIEs would be valuable, knowing how to navigate their technologies would be problematic in practice.
- The variety of formats in which data could be presented could make it difficult for users, especially during the stress of disaster response, to effectively use the information.
- Many HIE efforts in California are already pursuing (or capable of) use of the eHealth Exchange transactions for broader exchange efforts.
- Most public and enterprise HIOs in California use an array of technologies including Mirth, Epic, and Orion; each of which have demonstrated effective use of the eHealth Exchange (i.e. IHE) transactions.



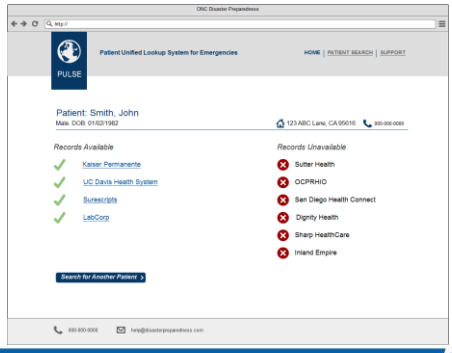
PULSE Log-In



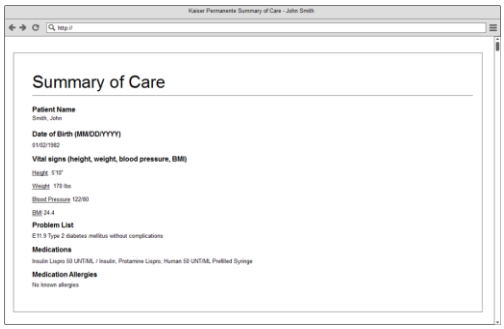
PULSE Patient Search



PULSE Response Page



PULSE Clinical Document Response



Important Considerations

- Credentialing Users
- Type and Breadth of Emergency Declarations
- HIPAA / Privacy and Security
- CalDURSA Contractual Framework
- Organizational and User Training and Awareness

Trust and Incrementalism

- An important aspect of driving wiliness to participate in the use case was the limited circumstances in which cross-HIE access would be enabled.
- While CaHIE and the HIOs throughout California coordinate to achieve the broader future objective of on-going exchange among HIOs (including with EMS), national experience suggests than smaller incremental steps can be valuable while still working towards that goal.
- The the findings in this report suggest beginning with a focus on declared disasters in order to drive participation, expanding scope to include use of the solution in smaller but still critical response situations is a natural evolution.

Current Status

- CalEMSA, CaHIE, ONC, ASPR, and Ai are recruiting HIOs, health systems, and emergency medical services agencies to participate in the pilot.
- Working with Nursys, the National Commission on Certification of Physician Assistants (NCCPA), and the California Disaster Healthcare Volunteer registry to assist with the approach and practicalities of credentialing users to gain access to PULSE.
- Creating a detailed technical specifications for each of the pilot participants and identify challenges and roadblocks that may hinder the creation and relevance of PULSE.

Current Status Cont.

- The CalDURSA supports the exchange of patient data for the disaster response use case and will be used as the DURSA between pilot participants.
- The level of emergency that triggers PULSE will need to be determined (local, county, state, national, etc.)

QUESTIONS

Scott Afzal
Partner, Audacious Inquiry
scott@aing.com
443-812-4636